

Amendments to the Claims

The following claims are intended to replace all prior versions and listings of the claims in this application:

- 1-6. (Cancelled)
7. (Previously Presented) A method according to claim 49 wherein the polyalkylene glycol comprises a polyethylene glycol.
8. (Cancelled)
9. (Previously Presented) A method according to claim 49 wherein the polyalkylene glycol is a polyethylene glycol of molecular weight in the range of from 200 to 1000.
10. (Previously Presented) A method according to claim 49 wherein the polymeric antimicrobial is present in a composition that further comprises a pharmaceutically or veterinarily acceptable inert carrier for gastrointestinal administration to animals.
11. (Previously Presented) A method according to claim 10 wherein the carrier for gastrointestinal administration is selected from the group consisting of controlled release polymers, olive oil, peanut oil, sesame oil, sunflower oil, arachis oil, coconut oil, liquid paraffin, ethylene glycol, propylene glycol, polyethylene glycol, ethanol, propanol, isopropanol, glycerol, fatty alcohols, triglycerides, polyvinyl alcohol, partially hydrolysed polyvinylacetate and mixtures thereof.
12. (Previously Presented) A method according to claim 10 wherein the composition is in the form of a feed additive or drinking water additive comprising from 0.1 to 70% by weight of the polymeric antimicrobial.
13. (Previously Presented) A method according to claim 49 wherein the polymeric antimicrobial is administered in the form of a composition comprising an antimicrobially effective amount of the polymeric antimicrobial diluted with water.
14. (Cancelled)

15. (Previously Presented) A method according to claim 49 wherein the polymeric antimicrobial is administered as a drinking water composition containing in the range of from 0.0001 to 10% by weight of the polymeric antimicrobial.

16. (Previously Presented) A method according to claim 49 comprising a further administering a chemotherapeutic agent.

17. (Previously Presented) A method according to claim 49 comprising a further administering an antimicrobial.

18-24. (Cancelled)

25. (Previously Presented) A method according to claim 49 wherein the polymeric antimicrobial is orally administered.

26. (Previously Presented) A method according to claim 49 wherein the animal is suffering from at least one gastrointestinal disease selected from the group consisting of gastroenteritis, ulcer, diarrhoea, dysentery, and insufficient weight gain.

27. (Previously Presented) A method according to claim 49 wherein the animal is suffering from at least one of diarrhoea, gastroenteritis, and dysentery.

28. (Previously Presented) A method according to claim 49 wherein the animal is selected from the group consisting of dogs, pigs, sheep, horses, cattle, cats, poultry, ducks, turkeys and quail.

29. (Previously Presented) A method according to claim 49 wherein the animal is selected from ruminant animals and the antimicrobial is rectally administered.

30. (Previously Presented) A method according to claim 49 wherein the animal is selected from poultry and pigs.

31. (Previously Presented) A method according to claim 49 wherein the animal is a partially grown pig.

32. (Previously Presented) A method according to claim 49 used for treatment or prophylaxis of porcine post weaning colibacillosis wherein said administering comprises

orally administering an antimicrobially effective amount of the polymeric antimicrobial to young pigs after weaning.

33. (Previously Presented) A method according to claim 49 wherein the polymeric antimicrobial is administered at a dose of from 0.05 to 5000 mg/kg/day.

34. (Previously Presented) A method according to claim 49 wherein the polymeric antimicrobial is administered at a dose in the range of from 0.5 to 500 mg/kg/day.

35. (Previously Presented) A method according to claim 32 wherein the young pigs are administered a dose of the polymeric antimicrobial in the range of from 0.05 to 50 mg/kg/day.

36. (Previously Presented) A method according to claim 49 wherein the gastrointestinal disease results from one or more microbes selected from the group consisting of Coliforms, Salmonella, P.aeruginosa, Helicobacter, Proteus, Enterobacteria, Yeasts, Protozoa, Clostridia and Shigella.

37. (Previously Presented) A method according to claim 49 wherein the gastrointestinal disease results from one or more of H. pylori and Coccidia.

38. (Previously Presented) A method according to claim 49 wherein the gastrointestinal disease results from at least one of enterotoxigenic E. coli and β -haemolytic E. coli.

39. (Previously Presented) A method according to claim 49 used in treatment or prevention of necrotic enteritis in poultry comprising administering to poultry an antimicrobially effective amount of the polymeric antimicrobial.

40-41 (Cancelled)

42. (Previously Presented) A method according to claim 49 used in treatment or prevention of coccidiosis in poultry comprising administering to poultry an antimicrobially effective amount of the polymeric antimicrobial.

43-45. (Cancelled)

46. (Previously Presented) A method according to claim 49 wherein the polymeric antimicrobial is administered in an animal feed composition comprising a feed material and an antimicrobially effective amount of the polymeric antimicrobial.

47. (Previously Presented) A method according to claim 46 wherein the polymeric antimicrobial is present in an amount of from 0.001 to 25% by weight of the total feed composition.

48. (Cancelled)

49. (Currently Amended) A method for treating gastrointestinal disease in an animal subject comprising:

preparing a polymeric antimicrobial by reacting poly(2-propenal, 2-propenoic acid) with polyalkylene glycol in the presence of water at a temperature between 60°C and 150°C for between 1 to 170 hours, wherein the poly(2-propenal, 2-propenoic acid) contains from 0.1 to 5 moles of carboxyl groups per kilogram of polymer, whereby antimicrobial activity of the polymeric antimicrobial derived from poly(2-propenal, 2-propenoic acid) is increased compared with the poly(2-propenal, 2-propenoic acid); and

administering the prepared polymeric antimicrobial to an animal subject to treat gastrointestinal disease of the animal subject ~~a polymeric antimicrobial derived from poly(2-propenal, 2-propenoic acid) by a process comprising heating poly(2-propenal, 2-propenoic acid) comprising from 0.1 to 5 moles of carboxyl groups per kilogram of polymer in a polyalkylene glycol in the presence of water at a temperature in the range from 40°C to 150°C for a period from 1 to 1400 hours whereby antimicrobial activity of the polymeric antimicrobial derived from poly(2-propenal, 2-propenoic acid) is increased compared with the poly(2-propenal, 2-propenoic acid) and wherein the poly(2-propenal, 2-propenoic acid) is formed by homopolymerization of acrolein by ionic initiation and oxidation of the homopolymer of acrolein to introduce said carboxyl groups.~~